

Amendments to the Specification:

Please replace the paragraph beginning on page 6, line 21, and continuing through page 7, line 20, with the following amended paragraph:

One embodiment of a storage system to which the present invention is applied, will be described below using the drawings. Fig. 1 is a schematic block diagram showing an example of a configuration of a storage system to which the present invention is applied. Reference numeral 101 indicates a storage sub-system to which the present invention is applied, reference numerals 114 and 115 indicate host devices such as host processors, which execute various processes by using the sub-system 101 as a secondary storage system, reference numeral 116 indicates a management device which is used to maintain or operation-manage the storage sub-system 101, respectively. The storage sub-system 101 includes storage physical devices 102 through 106 such as a plurality of disk devices or the like. The storage physical devices may comprise ones different in access rate from one another. Reference numerals 107 and 108 indicate port interfaces which provide interface 118 with one or plural upper or host devices. They are connected to their corresponding host devices through a network such as an SCSI (Small Computer System Interface), a LAN (Local Area Network) or a SAN (Storage Area Network) or the like. Reference numeral 109 indicates a disk controller, and reference numeral 113 indicates a network interface which is used for connection to the management device 116 through the LAN 117 or the like.

Please replace the paragraph beginning on page 11, line 26, and continuing through page 13, line 8, with the following amended paragraph:

An example in which data blocks are stored according to the definition of a data structure of a file, will next be shown as another embodiment. Fig. 4 shows an example of a configuration of a file storing a bit stream of object-encoded multimedia data such as MPEG4. The multimedia data comprises data encoded every objects set for every scene that is a set of data for each frame or a set of data reproduced with synchronization. Encoded data which are stored with being added with headers every object data of the respective scenes. Reference numeral 401 indicates a scene 1. The scene 1 comprises an audio object 403, a compressed video object 404, and an animated object 405. A playback or reproducing device performs decoding processes for every these objects and thereafter reproduces the objects in

sync with one another. Data 405 through 407 for every objects of a scene subsequent to the scene 401 are stored in a scene 402. Reference numeral 408 indicates a header portion of object data, which stores therein an object 409 corresponding to video data. The header portion includes time stamp information, a sequence number, an identifier shared between data to be synchronized, etc. as synchronous data necessary to be reproduced in sync with the respective objects. Also the header portion might include a specific header which stores a coding system required to reproduce the respective objects, a band necessary for reproduction and communications, etc. When it is desired to provide services such as moving picture delivery using the object-encoded file referred to above, it is considered that data customized every users are transmitted. It is considered at this time that only a necessary portion is selected from the intended object and then transmitted. At this time, a policy is considered that an object which needs a portion accessed by a large number of users or which needs a wide band, is placed in a storage physical device fast in access rate.

Please replace the paragraph beginning on page 26, line 2, and continuing through page 28, line 13, with the following amended paragraph:

Fig. 10 shows the operation of the storage sub-system 101 where a request for the storage of a file having such a data structure as shown in Fig. 6 is made to the storage sub-system of the present invention from the host device such as the host processor. In a process step 1001, the storage sub-system 101 determines whether the file storage request has been made. If it is determined that no storage request has been made, then the storage sub-system 101 executes another process 1002. Next, the storage sub-system 101 retrieves whether the XML file of Fig. 5 having defined the data structure contained in the file subjected to the storage request exists on the control memory 112 (Step 1003). If it is found not to exist, then the storage sub-system 101 executes a normal placement process 1006. Next, the storage sub-system 101 retrieves whether the XML file of Fig. 6 described based on the definition of the data structure of Fig. 5 with respect to the file subjected to the storage request exists on the control memory 112 or it exists in a predetermined position of the file subjected to the storage request (Step 1004). If it is found not to exist, then the storage sub-system 101 executes the normal storage process 1006. The storage sub-system 101 retrieves whether the XML of Fig. 7 having described a process in which storage physical device is placed with respect to the file placed under the definition of the data structure of Fig. 5, exists

on the control memory 112 (step 1005). If it is found not to exist, then the storage sub-system executes the normal placement process 1006. The storage sub-system 101 makes a decision as to the end of the file subjected to the storage request in a process step 1007. If the end of the file is reached, then the storage process is terminated. The storage sub-system 101 applies an XML having described a process for the data of Fig. 7 for each object of each scene from within the XML descriptive of the data structure of the data file of Fig. 6 and evaluates it (Step 1008). As a result, when a decision is made as storing to a specific storage physical device (Step 1009), the storage sub-system 101 calculates the size of an object set for each scene of 634 from start and end positions of the object within a data file having attributes for an object body contained in the object, and assigns a necessary storage area from a free area of the selected storage physical device (~~Step 1010~~)(Step 1010). When no storage physical device is selected, the storage sub-system 101 executes a normal placement process 1014. When the selected storage physical device has no free space, the storage sub-system 101 notifies the fact that no free space is provided for the selected storage physical device, or the applied policy to the management device 116. When no free space is provided, the storage sub-system executes the normal placement process 1014 or shifts the area already assigned to the selected storage physical device to another storage physical device to thereby ensure the corresponding area. Next, the storage sub-system sets information about an area assigned to the table for converting the logical addresses used to access to the storage sub-system 101 in Fig. 9 to their physical addresses for the storage physical devices lying within the storage sub-system, which are associated with the storage physical devices, to the assigned areas (Step 1011)(Step 1011). Next, the storage sub-system 101 writes data of the object into the area assigned for the storage physical device (Step 1012) and makes preparations for execution of a process for the next object (Step 1013).